

Claims

- 1 1. A process of dyeing a seat belt with a dye range,  
2 the seat belt comprising a woven polyester material  
3 containing PET-polycaprolactone diblock copolymer  
4 fiber, the process comprising the steps of:  
5 introducing the webbing into an oven under tension  
6 in the range of about 138-167 C (280-330 F).
- 1 2. The process as defined in Claim 1 wherein the  
2 tension of the webbing within the oven is obtained by a  
3 step of: controlling the relative speed of one of a  
4 brake and a haul unit, wherein the haul unit operates  
5 at about 2-7% faster than the brake unit.
- 1 3. The process as defined in Claim 1 wherein the  
2 dwell time of any particular length of seat belt in the  
3 oven is about 1-5 minutes.
- 1 4. The process as defined in Claim 1 wherein after  
2 the seat belt webbing exits the oven, it is washed and  
3 then steamed wherein the temperature within a steaming  
4 unit is in the range of about 99-135 C (210-220 F).
- 1 5. The process as defined in Claim 1 wherein the  
2 webbing is not quenched while it is within or adjacent  
3 to the oven, which is a thermostol oven.
- 1 6. The process as defined in Claim 1 including the  
2 step of submersing the webbing within a dye bath  
3 comprising a 2 solution by volume of blended aromatic  
4 solvents and monoacetate esters carrier.

1 7. The process as defined in Claim 6 wherein the step  
2 of submersing the webbing within a dye bath includes  
3 immersing the webbing in a solution containing a photo  
4 stabilizer based on copper complex and a  
5 chlorobenzotriazene UV absorber.

1 8. The process as defined in Claim 6 wherein the step  
2 of submersing the webbing within a dye bath further  
3 includes a step of immersing the webbing in a solution  
4 containing a polyester resin fatty acid derivative  
5 overcoat in the dye mix.

1 9. The process as defined in Claim 1 including the  
2 step of introducing the webbing to a scour unit having  
3 a scour mix of at least 2% monobelate ester carrier.

1 10. The process as defined in Claim 1 including the  
2 step of passing the webbing through a terminal dryer  
3 and subsequent to drying applying an over coating to  
4 the webbing comprising a perfluoroalkylcopolymer  
5 emulsion finish.

1 11. A process of dying a seat belt within a dye range,  
2 the seat belt comprising a woven material containing a  
3 blended hybrid fiber of the type known as PET-  
4 polycaprolactone diblock copolymer fiber, the process  
5 comprising the steps of: heating the webbing to a  
6 preferred range while under tension and subsequently  
7 washing, steaming, finish coating and drying the  
8 webbing.